

REMARKS

Claims 1-4 and 7-10 are now pending in this application. Claims 5, 6, and 11 have been cancelled without prejudice. Claim 1 has been amended, and support thereof can be found in original Claim 5; p.6, Ins. 4-9; p. 12, Ins. 15-16; p. 12, Ins. 22-27. No new matter has been presented by these amendments, and no new issues have been raised.

Reconsideration of the above-identified application in view of the preceding amendments and the following remarks is respectfully requested.

THE CLAIMED INVENTION

In brief, the amended claims cover a curable composition resulting from a Michael reaction, which can be crosslinked at low temperatures or room temperature, but is also storage stable at room temperature, and does not suffer from the drawbacks of strong basic catalysts (which may impart yellowing cloudiness) or hydrolysis instability to the coating. In particular, the claimed invention requires a **tertiary alkyl phosphine** as the basic catalyst in a **Michael reaction**. Furthermore, the claimed invention requires a carboxylic acid (D) in the curable composition to be a saturated fatty acid having a molecular weight 80 g/mol or less, and the carboxylic acid (D) to be added **before** the tertiary alkyl phosphine (C).

CLAIM REJECTIONS – 35 U.S.C. §103

Claim 5 is objected to because of the following informalities: line 2 lists a molecular weight but fails to give units for the value. (Office Action, p. 2).

Claim 5 has been cancelled. Claim 1 has been amended to include the limitations of claim 5, and defines the unit for the molecular weight as "g/mol."

Therefore, the applicants respectfully request that this objection be reconsidered and withdrawn.

Claims 1-4 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,959,028 to Irie, et al., in view of U.S. Patent Application Publication No. 2007/0047071 to M. Van Dijk, et al. (Office Action, p. 2).

Irie discloses a curable resin composition formed by a Michael reaction of a component having a plurality of α,β -unsaturated carbonyl groups and a component having a plurality of activated methylene group in the presence of a strong basic catalyst. However, among other deficiencies discussed below, Irie fails to teach the claimed carboxylic acid, e.g., formic acid, acetic acid, or propionic acid.

The Office Action conceded that Irie fails to disclose a tertiary alkyl phosphine, and cited Van Dijk for the disclosure a trioctyl phosphine.

For the §103 rejection to be proper, there must be some prior art teaching which would have provided the necessary incentive or motivation for modifying the reference teachings. *In re Laskowski*, 12 U.S.P.Q. 2d 1397, 1399 (Fed. Cir. 1989); *In re Obukowitz*, 27 U.S.P.Q. 2d 1063 (BPAI 1993). No motivation is provided in Irie or Van Dijk to modify its teachings in a manner that would result in a composition rendering the claimed invention obvious.

Contrary to the Office Action's assertion, Van Dijk fails to supply the missing element of a tertiary alkyl phosphine to be **used as a catalyst in a Michael reaction** for the simple fact that **Van Dijk does not involve a Michael reaction**. Van Dijk relates to a composition comprising an isocyanate-functional compound, an isocyanate-reactive compound, and a co-catalyst comprising a phosphine and a Michael acceptor. A Michael reaction, however, is not disclosed anywhere in Van Dijk, let alone involving

a tertiary alkyl phosphine as a catalyst in a Michael reaction. Additionally, **Van Dijk's** examples use only tertiary **aromatic** phosphines, not tertiary **alkyl** phosphine. Given that **Van Dijk** does not involve a Michael reaction and **Irie** is completely silent as to using a tertiary alkyl phosphine as a Michael reaction catalyst, there is absolutely no motivation to combine the cited references to supply the tertiary phosphine of **Van Dijk** as the basic catalyst of the Michael reaction taught in **Irie**. Accordingly, **Irie** and **Van Dijk** do not render Claims 1-4 obvious.

Furthermore, neither reference teaches nor suggests the claimed sequence of adding carboxylic acid and tertiary alkyl phosphine. Claim 1 requires adding carboxylic acid **before** tertiary alkyl phosphine, and the Specification cautions that doing otherwise "may result in an immediate increase in viscosity and formation of gel particles, so that the curable coating composition can no longer be applied." (Specification, p. 13, lines 1-7, 14-17). However, **Irie** and **Van Dijk** are completely silent on this matter. Given that the references do not make any disclosures regarding the claimed sequence of adding carboxylic acid and tertiary alkyl phosphine, **Irie** and **Van Dijk** fail to render Claims 1-4 obvious.

In light of the foregoing reasons, namely that (1) there is absolutely no motivation to combine **Irie** and **Van Dijk** given that **Van Dijk** does not involve a Michael reaction; and (2) neither reference teaches nor suggests the claimed sequence of adding carboxylic acid before tertiary alkyl phosphine, the applicants respectfully submit that Claims 2-4 are not rendered obvious by **Irie** in view of **Van Dijk**. Therefore, the applicants respectfully request that this rejection be reconsidered and withdrawn.

Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Irie, in view of Van Dijk and further in view of U.S. Patent No. 5,219,958 to Noomen, et al. (Office Action, p. 3).

Claim 5 has been cancelled. Amended Claim 1 contains the limitations of original Claim 5.

The Office Action conceded that **Irie** and **Van Dijk** fail to disclose a carboxylic acid as being a saturated fatty acid with a molecular weight of 80g/mol or less, and cited **Noomen** for this disclosure. However, **Noomen** fails to cure the deficiencies of **Irie** and **Van Dijk**, namely the disclosure of using a tertiary alkyl phosphines as the catalyst for a Michael reaction. Furthermore, none of the references teach nor suggest the claimed sequence of adding carboxylic acid before tertiary alkyl phosphine.

In light of the foregoing reasons, the applicants respectfully submit **Irie**, in view of **Van Dijk** and **Noomen**, fails to render Claim 1 obvious. Therefore, the applicants respectfully request that this rejection be reconsidered and withdrawn.

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irie, in view of Van Dijk. (Office Action, p. 3).

In light of the foregoing reasons, namely that (1) there is absolutely no motivation to combine **Irie** and **Van Dijk** given that **Van Dijk** does not involve a Michael reaction; and (2) neither reference teaches nor suggests the claimed sequence of adding carboxylic acid before tertiary alkyl phosphine, the applicants respectfully submit that **Irie** and **Van Dijk** fail to render Claims 7-10 obvious. Therefore, the applicants respectfully request that this rejection be reconsidered and withdrawn.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Irie, in view of Van Dijk and Noomen. (Office Action, p. 4).

Claim 11 has been cancelled rendering this rejection moot.

CLAIM REJECTIONS –

NONSTATUTORY OBVIOUSNESS-TYPE DOUBLE PATENTING

Claims 1-4 and 7-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,897,264 to Lachowicz, et al., in view of U.S. Patent No. 4,871,822 to Brindöpke, et al., and Irie, et al. (Office Action, p. 5).

Claims 5 and 11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of Lachowicz in view of Brindöpke and Irie, and further in view of U.S. Noomen. (Office Action, p. 7).

The applicants respectfully submit that the claimed invention is patentably distinct over the claims of **Lachowicz** or **Brindöpke**, in combination with **Irie**, **Van Dijk**, and **Noomen**. In particular, none of the cited references, including **Lachowicz** and **Brindöpke**, disclose using a tertiary alkyl phosphines as the catalyst for a Michael reaction. Furthermore, none of the references teach nor suggest the claimed sequence of adding carboxylic acid before tertiary alkyl phosphine. Therefore, the applicants respectfully request that this rejection be reconsidered and withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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